

Notice of Allowability

Application No.

09/672,639

Examiner

Jin-Cheng Wang

Applicant(s)

DOTSON ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/31/2005.
2. ☒ The allowed claim(s) is/are 1-14,22-27 and 29-35.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>12/26/2000</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

Nothing in the prior art anticipates or suggests, "a logic device including a pixel shifting logic system, a YcrCb encoder, and a DAC adapted to select appropriate pixel data from the grayscale generator in accordance with a selected display mode, and to provide the selected pixel data to a single output, wherein the single output can provide data to both CRTs and LCDs" in a raster engine for interfacing a frame buffer in a computer system to a plurality of disparate display types over a single interface comprising at least one control register programmable via the computer system to select a display mode, a programmable grayscale generator that generates grayscale formatted data concurrently for a plurality of disparate display types and formats from pixel data in the frame buffer, wherein the grayscale generator generates grayscale data according to the selected display mode; and a logic device including a pixel shifting logic system, a YcrCb encoder, and a DAC adapted to select appropriate pixel data from the grayscale generator in accordance with a selected display mode, and to provide the selected pixel data to a single output, wherein the single output can provide data to both CRTs and LCDs, set forth in the independent claim 1.

Nothing in the prior art anticipates or suggests, "parallel output means for selecting appropriate pixel data from the means for obtaining pixel data for the selected display mode, and for providing the selected pixel data at a single parallel output according to the selected display mode, wherein the single output provides data to both CRTs and LCDs" in a raster engine for interfacing a frame buffer in a computer system to a plurality of disparate display types over a single interface comprising means for selecting a display mode; means for obtaining pixel data

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from the frame buffer and programmable via the computer system to generate grayscale formatted data concurrently for a plurality of disparate display types and formats including the selected display mode; means for buffering data transferred from the frame buffer to eliminate or reduce data underflow; and parallel output means for selecting appropriate pixel data from the means for obtaining pixel data for the selected display mode, and for providing the selected pixel data at a single parallel output according to the selected display mode, wherein the single output provides data to both CRTs and LCDs; set forth in the independent claim 22.

The prior art Tjandrasuwita teaches flat panel interface 113 of figure 2 for interfacing a frame buffer in a computer system to a plurality of disparate display types over a single interface wherein the display mode can be selected at any given time (see figure 2, and column 6, lines 1-20) and a programmable grayscale generator (e.g., figures 2-4 and column 5, lines 11-67, column 6, lines 1-67, column 8, lines 1-18) that generates grayscale formatted data (e.g., column 3, lines 60-67; column 8, lines 28-35) concurrently for a plurality of disparate display types and formats (e.g., Dual Panel Dual Scan Super Twisted Nematic LCD Panels and single STN LCD panels; column 11, lines 15-51) from pixel data in the frame buffer (e.g., column 4, lines 50-67; column 5, lines 1-47), wherein the grayscale generator generates grayscale data according to the selected display mode (e.g., column 5, lines 58-65, the display mode can be selected at any given time; see also figure 2, and column 6, lines 1-20, to generate gray scale shading using time or frame modulation technique and the different gray shades can be generated by turning on and off the pixel; see for example, column 6, lines 48-60); and a logic device (e.g., multiplexor 208; SEL2 which may originate from a control register that is programmed by the CPU as indicated by the

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user) adapted to select appropriate pixel data from the grayscale generator (e.g., figures 2-4) in accordance with a selected display mode (see the abstract of the reference), and to provide the selected pixel data to a plurality of display devices (e.g., figure 2, and column 6, lines 2-20).

However, Tjandrasuwita does not explicitly disclose the claimed limitation that the single output can provide or provides data to both CRTs and LCDs set forth in the independent claim 1 or the claim 22. Tjandrasuwita is also silent to the claim limitation of “a Y Cr Cb encoder” set forth in the independent claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw



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